Chapter Three

Growth and Development

Child care providers can be referred to the large variety of resources on growth and development included in the references at the end of this manual. Appendix F contains an overview of normal infant/toddler growth and development that can be used as a handout for child care staff. This chapter deals with primary growth and development issues for infants and toddlers, birth-to-three.

The Health Consultant's Role: Assessment of Growth and Development

The health consultant should be aware of normal growth and development and the early warning signs that may indicate a child's need for further assessment (see Red Flags section in this chapter). This information also should be shared regularly with child care providers. The consultant also needs to be aware of screening tools useful in assessing young children's development. More importantly, the consultant should be knowledgeable about the early intervention systems in the state and community and the names and telephone numbers for those local contacts. As federal legislation requires states to locate and identify children with special needs, procedures for screening and referring a child for special services have been established by the lead agencies in each state. Public Law 99-457 requires public schools to extend special education services to children as young as three years of age. However, the lead agency for special services for children birth to age two is determined by each state. The Washington State Infant-Toddler Early Intervention Program (ITEIP) has materials that can be useful in identifying the need for assessment and follow-up of developmental concerns. The "Birth to Six Prescreen" (ITEIP) poster and "Watch Me Grow" (CHILDProfile) chart describe typical development (see Resources and References).

The Department of Social and Health Services (DSHS) is the lead agency for intervention services planning. Planning is done at the county level through County Interagency Coordinating Councils (CICCs). Become familiar with the lead agencies serving young children with special needs to learn about options for screening and assessment, the eligibility requirements for children to be identified as having special needs, and options for service delivery. You can get more information about the CICC or the ITEIP by calling the ITEIP state office (see Resources and References).

The Assessment Process

The health consultant is often asked for opinions on the development of children in care. Parent/guardian permission must be obtained before the CCHC can do an assessment of the child's development. The child care provider can assist in obtaining this permission. Four steps outline the assessment process.

1. Getting permission (see Appendix C)
2. Observing the child

The Health Consultant's Role: Assessment of Growth and Development *continued*

3. Gathering information from the family and caregiver
   Information about the child's growth and development from birth to the present, as well as how the child responds in various settings, can be obtained through informal conversation, informal inventories, or questionnaires. The family may have written information about the child's development if screenings or evaluations have occurred previously.

4. **Screening the child's development**
   Screening typically consists of a brief health exam that includes hearing and vision and a checklist to determine how the child is developing in their gross motor, fine motor, cognitive, communication, social, emotional and self-help skills. Screenings may occur in child care centers, doctors' offices, health clinics, hospitals, and during local health fairs.
   The administration of some screening tools requires formal training, such as the Denver Developmental Screening Test III. Other screening tools require no formal instruction and can be used effectively after careful review of the examiner's manual and practice for that particular tool.

Screening Tools

Other examples of screening instruments for young children include:

1. AGS Early Screening Profiles (ESP);
2. Developmental Indicators for the Assessment of Learning, Third Edition (DIAL-3);
3. Brigance Early Preschool Screen;
4. Brigance Preschool Screen;
5. LAP-D Normed Screens.

See the Resources and References for information on obtaining these tools.

Benchmarks in Growth and Development

The CCHC should be looking for certain markers that children are growing and developing normally. Child care providers should be encouraged to note these benchmarks and share them with other staff and the child's parents. This will encourage all staff to note changes and/or lags in growth and development as well as strengthen the parent-provider relationship. The following overview of growth and development is also provided in a handout format in Appendix F. For a more in-depth discussion of growth and development, please see Resources and References.

Growth

The two main factors that affect children's growth (height and weight) are their parents and their living conditions. Children inherit their growth characteristics. In terms of living conditions, nutrition is the most important factor affecting their growth.

Height and Weight Growth in Infancy (Birth – One Year)
Infants, like adults, vary in size and shape. Although they can vary a lot in their growth and still be healthy, watching growth is a way for you to see if they are getting good nutrition. The following heights and weights are general guides (averages), and a more accurate method is to use the Center for Disease Control and Prevention Growth Charts found in Appendix F.

Benchmarks in Growth and Development
continued

1. The average weight at birth varies from 6–9 pounds.
2. The average length at birth varies from 18–22 inches.
3. Infants gain 4–5 ounces a week (1–1 1/2 pounds a month) from birth to six months, doubling their birth weight by five months. (For example: 7 pounds at birth = 14 pounds at five months).
4. They gain 3–4 ounces a week from six months to one year, tripling their birth weight at one year (7 pounds at birth = 21 pounds at one year).
5. By their first birthday, infants have increased their birth length by half. An infant 20 inches at birth will be about 30 inches at one year.

Height and Weight Growth from Birth through Five Years
Growth slows down by the end of the first year. Preschool years are a time of slow, but steady growth for children. During their second and third years (from 1–3) children gain about 5–6 pounds per year. From 3–5 years they gain about 4–5 pounds a year. Generally, children's height at two years will be one half of their adult height.

Development

Development occurs in the following areas:

1. **Motor skills** – How well a child moves all the muscles in the body, how muscles work and how the nervous system tells the muscles what to do;
2. **Language skills** – How a child speaks, hears, and understands;
3. **Social and emotional skills** – How a child learns to see himself/herself as a loved, loving, lovable, unique human being. Also, how a child knows what is expected and how to act in their culture or society;
4. **Sexuality** – A sense of a sexual self that develops from birth on. Sexual development is influenced by physical, emotional, and intellectual growth as well as by social and cultural expectations;
5. **Early brain development (thinking and intellectual) skills** – How a child thinks and learns.

The following is a brief discussion of development for infants as noted above. For more information, see the Resources and Reference section as well as Appendix F.

Motor Development
Motor skills and control increase as the infant grows and as they are provided the opportunities to develop muscle strength and control. Placing them in a variety of positions is important. Infants birth to 3 months move their extremities very well but, their movements are not well coordinated. Infants in this age range also can lift their heads when placed on their stomachs and will follow objects with their eyes from side to side when on their backs.

From 3–6 months infants gain more control of their extremities and can roll over and reach for objects. By 5–6 months they can find their mouths with their hands.

At 6–9 months infants can sit alone, can pull themselves to standing, can possibly crawl, can reach out and can grab objects, and can play peek-a-boo. They may begin self-feeding, although the floor may get more than the infant.

By one year of age infants creep, crawl, pull themselves up, use thumb and forefinger in a pincer grasp, hold a cup, and have good hand-eye coordination.

Benchmarks in Growth and Development continued

Language Skills Development
From birth to three months infants can coo and can make other noises besides crying. They can hear well and like the human voice.

At 3–6 months they may begin babbling and will turn their eyes in the direction of the sound.

From 6–9 months infants may say "dada" and "mama" but probably do not connect these sounds with particular humans. Infants begin to imitate speech and like musical sounds and squeaky toys. By a year infants will use "mama" and "dada" for specific people in their lives and may understand one or two simple commands. They begin to understand "no, no."

Social and Emotional Skills Development
Infants are social beings from birth. Things that bring them comfort are being held and cuddled and sucking. They cry to let someone know their needs. If their cries are responded to, trust begins to develop during the first three months.

At 3–6 months, they begin to smile, make eye contact, and show signs of attachment. They also begin to react differently to different people in their environment.

At 6–9 months, typical infants get shy or uneasy with strangers. They begin to show strong attachment and enjoy games such as "pat-a-cake," etc.

By one year, infants are very responsive to adults' smiles, recognize themselves in a mirror, and begin to be interested in activities of others.

Normal Sexual Development
Sexual development, especially in young children, is an area that is often overlooked. Some of the behaviors children may exhibit related to their sexual development can be of great concern to providers and families. The following explanations about sexual development and guidelines to help this important aspect of development can be offered by the consultant.

Children begin to develop their sense of their sexual self at birth. Sexual development is influenced by physical, emotional, and intellectual growth and by social and cultural expectations. It is important to understand that children need to be supported as they exhibit normal sexual behaviors.

Responding to children's sexual behaviors can be difficult. Providers' own values and belief systems will greatly influence their responses. It is important for providers to have an understanding with families about how they will handle children's sexual behaviors. Developing sexuality guidelines and sharing those with families and staff can help the caregiver in supporting this important aspect of child development. The child care program should commit to:

1. Providing unbiased and accurate information to children that promotes respect of self and others, including others' values and beliefs;
2. Acknowledging that it is normal for children, even infants, to touch all parts of their bodies;
3. Using correct words for body parts and functions.

Early Brain Development
In recent years, there has been increased attention to understanding the development of the brain. Research confirms what many who work with young children have known of the importance of loving and secure relationships and age-appropriate stimulation in fostering

Benchmarks in Growth and Development continued

children's physical, psychological, and cognitive development. New technologies have allowed neuroscientists to measure and map the growth of the human brain, leading to new insights about promoting optimal development.

The following highlights of early brain development research might be a place to start when sharing this information with providers.

- Brain imaging technologies have revealed that the human brain is not fully developed at birth, but rather, is about 25% of its approximate weight at adulthood.
- At age three, a child's brain has reached about 90% of its full potential.
- After the age of three, the production of brain cells and nerve connections continues at a slower rate until the age of ten.
- After the age of ten, many of the connections that have been activated and used remain, while those that have not been used tend to disappear.

Thus, the quality of a child's earliest experiences has a critical impact on brain development.

Your role as the consultant may be to:

1. Make this information available to providers and families so they can apply it to their caregiving;
2. Direct providers and families to resources in their community to learn more about brain development (see Resources and References);
3. Advocate for the inclusion of infant child care providers when trainings are offered regarding brain development.

The human brain has a remarkable capacity to change, but timing is important. Research tells us there are optimum periods of development (see Appendix F). When caregivers understand the critical periods of development in the brain, they can help development by providing the right stimulation at the right time. There are optimal periods of opportunity, also called "prime times," during which the brain is particularly efficient at specific types of learning.

There also are times when negative experiences or the absence of appropriate stimulation are more likely to have serious and sustained effects. Therefore, well-designed, developmentally appropriate settings can improve the prospects and the quality of life for many children by helping children take advantage of the windows of opportunity or by preventing negative experiences during prime times of development.

When There is a Concern about Growth or Development

Although no two children develop at the same rate, most children will acquire skills and demonstrate behaviors in a predictable sequence and within certain age ranges. Children who do not follow these widely accepted developmental sequences may be developmentally delayed or at risk for developmental disabilities. The CCHC should have knowledge of typical child development and should be aware of resources to assist in sharing this information with child care providers as appropriate (see Resources and References Section).

As stated earlier, all caregivers should be familiar with normal growth and the CCHC should review growth and development at each visit. If a child's development is concerning the caregiver, the health consultant can do a preliminary assessment. If you or a child care provider suspect a child has some type of delay, this concern should be discussed with the parent. Some concerns may be solved simply with a referral to a pediatrician. Other concerns may be related to more serious ongoing problems that need further evaluation and follow-up. The signals below suggest a need for additional investigation.

Red Flags for Vision

1. One or both eyes continuously crossed
2. Eyes wander in opposite directions
3. Unable to follow moving object (after three months)
4. Eyes cross intermittently after 6 months of age.

Red Flags for Speech

1. No speech by two years
2. Unintelligible speech by three years
3. Stuttering
4. No improvement in speech development

Red Flags for Hearing

1. Caregiver/parent expresses concern. Ask caregivers/parents if they think the child can hear
2. Absence of startle response to loud noise
3. Failure to stop crying briefly when adult speaks (three months)
4. Failure to turn head in direction of sound (four months)
5. No babbling, imitating simple speech sounds (six–eight months)

Premature and Low Birth Weight (LBW) Infants

A majority of premature and/or LBW infants become normal, healthy children and adults. However, as a group, these infants have a higher rate of suboptimal growth, adverse health conditions, and neurodevelopmental problems than infants born full term. The number and severity of adverse outcomes generally increases with decreasing birth weight. A significant number of health and growth concerns must be monitored, especially during the first year of life, and often through adolescence. Basic monitoring during the first three years of life should focus on neuromotor development, and language and cognitive development using standard milestones of development that take into consideration the new brain development information. Several excellent resources to assist with this are listed in the Resources and References Section. Despite some association with specific complications during the neonatal period, individual development and outcome remains very difficult to predict, and often two infants with similar hospital courses develop quite differently. Some of the effects of prematurity and LBW can be lessoned or reversed with appropriate medical and developmental intervention and with family and parenting supports.

When There is a Concern about Growth or Development continued

Children born prematurely should have their age calculated from their due date rather than their date of birth at least until the child has reached two or three years of age. For example, a child born at 32 weeks gestation rather than 40 weeks is eight weeks early. Gestational corrected age for this child is calculated by subtracting 56 days from his/her chronological age.

Remember, developmental expectations for prematurely born children are based on their corrected, not chronological age. During the first year of life, premature infants tend to fuss and be more easily overwhelmed than other infants. They may also feed more slowly and require smaller, more frequent feedings. Parents become adept at reading their infant's cues, and child care providers should ask parents about signals their child may give and what response the infant may expect.

Providers should avoid "saucers" and "johnny jump-up" use during the first year for all children, as they often do not have the sensory/motor control to use these items. Providers and parents should encourage supervised play in prone (stomach-lying) position. Parents and child care providers should talk, read, and sing to and with the infant.

When there is a Concern about Behavior

Particularly with toddlers, concerns and questions about behavior such as biting, tantrums, oppositional behavior, and extreme withdrawal, are commonly brought to the health consultant. Consultants may be involved in facilitation or education regarding the behavior. The consultant may be called upon for very specific information about behavior and appropriate intervention.

Programs appreciate clear, concise, and realistic ideas for approaching behavior difficulties. However, some methods may not work for some children, and/or the child's behavior may stay the same or worsen. To handle behavior concerns effectively, it is important for the program to have skills and support in communicating with families and professionals regarding possible causes of the behavior. Creating a plan (done by the people most familiar with the child and perhaps facilitated by the CCHC) based on a child's social, emotional, cultural, developmental, and learning needs can be very beneficial to the child and rewarding to the staff and the family.

Prevention Strategies for Behavior Concerns

The following is an outline of activities that can help create an environment that is socially and emotionally enriching for children and that will prevent some behavior concerns. They will also promote staff skills in early identification and referral.

1. The program can begin communication about behavior needs upon enrollment. At enrollment (perhaps on the health history form), the program can ask for specifics about child's behavior, particularly regarding previous child care experiences. This also is the time for the director to share the philosophy of the program and behavior policies and practices.
2. Staff can become familiar with community resources. Examples of where to learn about community resources include licensing orientation, the Washington State Training and Registry System (STARS) trainings, community and vocational college classes, conferences, professional child care associations, consultants, and child care health consultants.
3. The program can build community alliances with child care resource and referral agencies, Parent and Family Resource Centers, public schools (including Childfind), hospital resource centers, behavior screening clinics, programs for children with special needs (particularly behavior issues), and local health jurisdictions.

Prevention Strategies for Behavior Concerns
continued

4. Staff can understand typical growth and development, including typical "difficult'' behaviors.
5. Staff can become familiar with the process of early identification and referral.
6. Staff can develop experience with and/or methods for supporting and fostering social and emotional health of infants.
7. The program can develop a transition policy that outlines their plan for moving children from one room to another.
8. The program can have a Behavior Policy—clear plans and policies provide options when directors and staff want to dismiss a child because they have "had enough.'' This also helps to support the programs when they have exhausted their resources and a child does need to be moved to a different environment in order to receive appropriate care. *The Child Care Behavior Handbook* and *Child Care Health Handbook* by Public Health of Seattle and King County are excellent resources that describe specific strategies staff can use to respond to challenging behaviors. Programs that specialize in behavior problems can provide sample behavior policies and consultation as well.

Transitions

Periods of transitions often cause disruptive behaviors in children. Preparing the child and family for transitions will lessen their negative impact. Families need support and information as they place their children in child care and as the child journeys from the infant room into the toddler or waddler room, into preschool, and finally into kindergarten. These transitions require the child and family to adjust to new settings, new providers, and new expectations. It is important for the health consultant to understand the emotional, social, and physical stress that transitions place on children, families, and staff. Assisting child care providers to develop transition plans will help to reduce these stresses.

A good transition into a child care program starts with introducing the family to the infant center or home. It is important to exchange information on how the family cares for the child at home and what the expectations will be of the staff and family. A home visit by a staff member is an effective way to learn about the culture of the family.

Families should be encouraged to accompany their child to the center or home for extended visits. Relieving separation anxiety is a major factor in this initial contact. Severe separation anxiety can be a block to developing a trusting relationship with the family and child.

For centers and homes caring for infants, you can suggest the use of some of the NCAST tools to help in this getting acquainted period. Sharing information about infants' sleep and wake patterns, observations, and conversations about feeding, and discussions about strategies to relieve infants' distress form the foundation for developing of trust between families, infants, and caregivers.

Arrival at and departure from child care centers and homes are times that typically present challenges for providers. They may turn to you for guidance in handling these challenges.

Being able to say good bye to a parent as children enter and journey through child care is an important and expected part of emotional growth. Frequently, children, families, and child care providers experience anxiety over this separation on arrival as well as the reunion between child and family at the end of the day. Family members may manifest this anxiety by being unable to

Transitions
continued

leave their child in care, feeling guilty, or becoming distraught with the staff over the care of their child. Infants may display separation anxiety by excessive crying, tantrums, and rejection of the child care provider. All involved may feel pain, anger, fear, and sadness.

Caregivers can prepare for this experience if you suggest they:

1. Develop a structured transition plan to help reduce separation anxiety at arrival and departure.
2. Talk with children and families whenever change is expected to occur. Remember that other life events like the birth of a sibling, a divorce, or stress at home, can rekindle separation anxiety that had previously resolved. Encourage communication about life changes.
3. Help and support children as they express sadness, anger, or fear.
4. Encourage children to put feelings into words: "I can see how sad you feel when Mommy leaves. She will be back later. Let's wave good bye to her.''
5. Avoid telling the child not to cry.
6. Remain loving and confident as you handle the child so they can feel your reassurance.
7. Be sensitive to the body cues of the child and hold children who are in distress and want to be held. Acknowledge the child by voice if you are busy, and the child is seeking your attention.
8. Never try to extinguish anxiety by ignoring the child's behavior.

Families also might experience this separation anxiety and need guidance and support. You may be called upon to help the staff develop ways to increase and enhance communication with the family. Information about separation anxiety and the importance of a healthy child care-to-home partnership will guide providers to offer the needed support to families.

Loving attachments are the foundations of healthy relationships and positive self esteem. Relieving separation anxiety is one important step to developing healthy attachment.

"Graduation" from the infant room to the toddler room is a significant transition for infants and their families that requires careful planning. With this shift, infants and their families will experience changes in many aspects of the caregiving described in this section. You can help staff assure that this passage is smooth by encouraging the following elements in the transition plan:

1. Evaluate the infant's development to assure the timing of the move is right;
2. Confer with the family and schedule visits for them and the infant (accompanied by the infant caregiver) into the toddler area;
3. Discuss with the family issues such as feeding, toileting, napping, curriculum, social skills building, and observations of these routines in the toddler room;

Children and their families need support and guidance at every stage of their journey through child care programs. You can play an important role by helping programs with the planning and coordination of this process.

Incorporating this Chapter into your Practice

- Ask the staff if they have any concerns about any child's growth and development.
- Observe the infants on each visit and comment informally to staff on the developmental stages observed.
- Bring visuals related to growth and development for posting so that staff and families can refer to them.
- Suggest activities to promote optimum brain development, or offer a series of on-site training modules on growth and development including brain development.
- Note and reinforce activities that promote optimal brain development. At each visit, suggest one thing that staff can do to implement concepts of brain development and normal growth and development.
- Have an "Ask the Health Consultant" notebook or pad at the parents' sign in sheet so questions that arise can be recorded to be answered at the next health consultation visit.
- Maintain a reference/resource library on growth and development.
- Identify screening tools to use in your practice and/or identify screening resources in your community.
- Contact your local child care resource and referral agency about training resources regarding early brain development and enroll in training through BrainNet™ if you haven't already received it.